

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) A device for detecting infrared radiation comprising a resonator element fixably attached to a supporting frame, characterised in that the supporting frame is arranged to absorb infrared radiation received by the device.
2. (Original) A device according to claim 1 wherein the supporting frame comprises a suspended portion spaced apart from the underlying substrate of the device, the resonator element being fixably attached to the suspended portion.
3. (Original) A device according to claim 2 wherein the suspended portion is spaced apart from the underlying substrate by a distance that is sufficient to form a resonant absorption structure for radiation having a wavelength within the infrared detection band of the device.
4. (Currently Amended) A device according to ~~any of claims 2 to 3~~ wherein the suspended portion is suspended from the underlying substrate on at least one leg.
5. (Original) A device according to claim 4 wherein the at least one leg comprises conductive material arranged to provide an electrical connection between the suspended portion and the underlying substrate.

6. (Currently Amended) A device according to ~~any preceding claim 1~~ wherein the supporting frame comprises a layer of infrared absorbent material.

7. (Currently Amended) A device according to ~~any preceding claim 1~~ wherein the resonator element and the supporting frame have different coefficients of thermal expansion.

8. (Currently Amended) A device according to ~~any preceding claim 1~~ wherein the a resonant frequency of the resonator element is arranged to vary when infrared radiation is absorbed by the device.

9. (Currently Amended) A device according to ~~any preceding claim 1~~ and further comprising oscillation means to drive the resonator element into resonance.

10. (Original) A device according to claim 9 wherein the oscillation means is arranged to electrostatically drive the resonator element.

11. (Currently Amended) A device according to ~~any preceding claim 1~~ wherein the resonator element is fixably attached to the supporting frame at two or more points.

12. (Currently Amended) A device according to ~~any preceding claim 1~~ wherein the resonator element comprises an elongate flexible beam.

13. (Currently Amended) A device according to ~~any preceding claim 1~~ wherein the supporting frame comprises a layer of material having an aperture defined therein.

14. (Currently Amended) A device according to claim 13 ~~when dependent on claim 12~~ wherein the resonator element comprises an elongate flexible beam, said the elongate flexible beam ~~is~~being arranged to lie across the aperture defined in the layer of material.

15. (Currently Amended) A device according to ~~any preceding claim 1~~ wherein at least one of the supporting frame and resonator element comprise a shape memory alloy.

16. (Currently Amended) A device according to ~~any preceding claim 1~~ comprising a plurality of detection elements, each detection element comprising a resonator element fixably attached to a supporting frame.

17. (Original) A device according to claim 16 wherein each detection element has an axis of symmetry.

18. (Currently Amended) A detector according to ~~any one of claims 16 to 17~~ wherein each detection element is arranged to output an electrical signal that is indicative of the resonant frequency of the associated resonator element.

19. (Currently Amended) A detector according to ~~any one of claims 16 to 18~~ wherein an array of detection elements is provided.

20. (Currently Amended) A device according to ~~any preceding claim 1~~ that is formed using a micro-fabrication process.

21. (Currently Amended) A device according to ~~any preceding claim 1~~ and further comprising readout electronics.

22. (Original) A device according to claim 21 wherein the supporting frame and resonator element are vertically integrated with the readout electronics.

23. (Currently Amended) A thermal imaging camera incorporating a device according to ~~any preceding claim 1~~.